

Date: Wed, 7 Sep 94 04:30:26 PDT  
From: Ham-Space Mailing List and Newsgroup <ham-space@ucsd.edu>  
Errors-To: Ham-Space-Errors@UCSD.Edu  
Reply-To: Ham-Space@UCSD.Edu  
Precedence: Bulk  
Subject: Ham-Space Digest V94 #247  
To: Ham-Space

Ham-Space Digest                      Wed, 7 Sep 94                      Volume 94 : Issue 247

Today's Topics:

                    \* SpaceNews 05-Sep-94 \*  
                    ARLK038 Keplerian data  
                    Beginners list  
listen in on space shuttle in Michigan?  
Two-Line Orbital Element Set Format

Send Replies or notes for publication to: <Ham-Space@UCSD.Edu>  
Send subscription requests to: <Ham-Space-REQUEST@UCSD.Edu>  
Problems you can't solve otherwise to brian@ucsd.edu.

Archives of past issues of the Ham-Space Digest are available  
(by FTP only) from UCSD.Edu in directory "mailarchives/ham-space".

We trust that readers are intelligent enough to realize that all text  
herein consists of personal comments and does not represent the official  
policies or positions of any party. Your mileage may vary. So there.

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Date: Tue, 6 Sep 1994 08:16:49 MDT  
From: ihnp4.ucsd.edu!mvp.saic.com!MathWorks.Com!europa.eng.gtefsd.com!  
howland.reston.ans.net!gatech!newsxfer.itd.umich.edu!nntp.cs.ubc.ca!alberta!  
ve6mgs!usenet@network.ucsd.edu  
Subject: \* SpaceNews 05-Sep-94 \*  
To: ham-space@ucsd.edu

SB NEWS @ AMSAT \$SPC0905  
\* SpaceNews 05-Sep-94 \*

BID: \$SPC0905

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SpaceNews  
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MONDAY SEPTEMBER 5, 1994

SpaceNews originates at KD2BD in Wall Township, New Jersey, USA. It is published every week and is made available for unlimited distribution.

★ SKY WATCH ★

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In September's evening twilight, Saturn shines in the east-southeastern sky just above the horizon. By nightfall it is fairly high and bright, appearing as a golden point of light to the naked eye. Because Saturn is closest to Earth this year, it will attain a magnitude of 0.5, located in the constellation of Aquarius. Saturn may also be found by looking for the bright star of Formalhaut in the constellation of Piscis Austrinus which has a magnitude of +1.2. A small telescope will reveal the complex system of orbiting rings and moons. The largest moon, Titan, appears as an 8th magnitude point near the planet. Also Saturn's rings are now only 7 degrees from being edge on as seen from here on Earth.

Near the bright star, Spica, one can find Venus shining at a magnitude of -4.4 when the month begins. On the evening of September 8, Venus and the young Moon will pass each other in the western evening sky. On the evening of September 20, Venus will reach it's greatest brilliancy at a magnitude of -4.6. If Venus is seen through a telescope, it will be found to be in a wanning crescent during it's brightest, showing us here on Earth, only half of it's brilliancy.

Jupiter is finally getting a rest after the tremendous impacts it suffered in July from the fragments of Comet Shoemaker-Levy 9. But Jupiter is still the second brightest planet after Venus, shining at a magnitude of -1.8 and can still be seen in the constellation of Libra. On September 1, Jupiter can be found about 15 degrees to the upper left of Venus and as the month passes, Jupiter will slide toward Venus in the western twilight sky. On September 9, Jupiter will be near the young crescent Moon. Watch for Venus, Jupiter, and the Moon on the evening of September 8 as the three approach each other. This will be a fine view for the astrophotographers who specialize in planet combinations.

Mercury can be found in the evening sky this month, but will remain very close to the horizon. Because Mercury will be so close to the horizon, it will probably be hidden from view this month.

Pluto can be found in the constellation of Libra and is in the southwestern sky just after sunset. But it shines at a magnitude of +13.8, so it will take a telescope of at least 8 inches to see the tiny point of light in the dark sky.

Uranus and Neptune, magnitudes 5.7 and 7.9, lie in the south after sunset during September in the rich starfields of Sagittarius.

Mars is the only planet that will rise a couple hours before dawn this month, in the eastern sky. On September 1 the wanning crescent Moon will be just below Mars.

[Info via Dave, N9JUW]

\* WEBERSAT-OSCAR-18 NEWS \*

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WEBER-1>CAST <UI>:

27-Aug-94

\*Collecting and Sending WOD

Week2: All TLM Ch# 3C 3D 3E 3F 40 41

\*New Images

\*Monday, New Spectrum

73, IK3WVJ

WEBER>SPECT <UI>:

Spectrum #00 taken 20:55:36 28-Aug-94

arrays: +X:321340 +Y:0 -X:15400 -Y:0 +Z:2790 -Z:0 (uA)

sun angle: el 1 az 90

horizon sensors: 1:190 2:223 s:84

temp:-1.65 to -2.24 C

average = 202.03 stddev = 572.54 pkdev = 519.18

40000...417FF .....

\* MIR NEWS \*

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The Mir space station apparently suffered no hits from the recent Perseid meteor shower. Several particles collided with the space station during last year's meteor shower.

The PROGRESS-M24 freighter was scheduled for launch Baykonur on 25-Aug-94 at 1425 UTC. Listeners in Western Europe were alerted listen for transmissions related to this launch on the known frequencies (166.140, 166.130, 165.874 and 922.755 MHz +/- Doppler) 3 hours after liftoff.

Instead of 4, only 2 EVAs will be made by Malenchenko and Musabayev. These EVAs are scheduled for the 8th and 12th of September 1994. Their purpose is to transfer solar panels from the Kristall to the Kvant-1 module.

The launch of Specktr (Module-0) has been delayed once again. Now there is word that the launch will take place in May 1995. Undoubtedly, this will also mean that the launch of Priroda (Module-E) will be put back too.

The schedule for American flights to Mir might need to be changed due to Spektr launch delay. No further details are available as of yet.

[Info via Chris v.d. Berg, NL-9165/A-UK3202]

\* MORE MIR NEWS \*

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Ascending nodes of Mir are currently taking place almost directly under the Sun. It is crossing the terminator close to its extreme northern and southern latitude excursions. As a result, Mir will be visible shortly before sunrise in the southern hemisphere, and shortly after sunset in the northern hemisphere for the next few weeks. Consult your favorite satellite orbital prediction software for the exact times for your location.

\* SAREX NEWS \*

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The STS-64 Space Shuttle Discovery Mission, tentatively scheduled for launch on September 9 at 20:30 UTC, will carry SAREX voice and packet radio on a 9 day mission. STS-64 will carry the Lidar In-Space Technology Experiment (LITE-1), the SPARTAN-201, and the Robot Operated Materials Processing System (ROMPS) experiment in addition to SAREX into a 57 degree inclination orbit.

Amateur Radio operators on Discovery include Dick Richards, KB5SIW, Commander, Blaine Hammond, KC5HBS, Pilot, and Jerry Linenger, KC5HBR, Mission Specialist. Primary callsign for FM voice contacts will be KB5SIW, while W5RRR-1 will be used for packet radio contacts. All operations will utilize separate uplink and downlink frequencies. DO NOT TRANSMIT on the downlink frequency!

Voice Freqs:	Downlink:	145.55 MHz (Worldwide)
	Uplinks:	144.91, 144.93, 144.95, 144.97, 144.99 MHz (Except Europe) 144.70, 144.75, 144.80 MHz (Europe only)

Note: the crew will not favor any specific uplink frequency, so your ability to work the crew will be the "luck of the draw"

Packet Freqs:	Downlink:	145.55 MHz
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Uplink: 144.49 MHz

The Goddard Amateur Radio Club station, WA3NAN, in Greenbelt Maryland will be active and carry SAREX Bulletins and Shuttle Retransmissions on 3860 KHz, 7185 KHz, 14,295 KHz, 21,395 KHz, 28,650 KHz and 147.450 MHz (FM).

The following Keplerian elements have been rotated to the current planned launch time of Sep 9 at 20:30 UTC. The JSC-005 epoch is at the start of orbit 5, after the trim burns on orbits 3 and 4. The negative drag fit was required to match the design trajectory because there is a 6.5 fps trim burn on orbit 28. The phasing and circ burns on orbit 99 lower the altitude by about 8 n.mi, so the second element set JSC-006 is required after that. These Keps are provided by Gil Carman, WA5NOM at the Johnson Space Center ARC.

STS-64

1	00064U		94253.10077961	-.00030838	00000-0	-39665-4	0	59
2	00064	57.0058	195.1865	0009670	275.6619	84.3358	16.05979206	51

Note: This element set (JSC-005) is valid for orbits 2 through 98.  
Use JSC-006 (below) after 15 Sep 94, 22:51:30 UTC (MET 6/03:49:30).

STS-64

1	00064U		94259.01448182	.00096406	00000-0	94275-4	0	62
2	00064	57.0059	167.2656	0009343	269.2157	90.7841	16.11240267	1002

Note: This element set (JSC-006) is valid for orbits 99 through 142.  
Use JSC-005 (above) before 15 Sep 94, 22:51:30 UTC (MET 6/03:49:30).  
The deorbit burn is scheduled for 18 Sep at 15:40 UTC (MET 8/20:38).

[Info via Frank Bauer, KA3HD0]

\* THANKS! \*

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Thanks to all those who sent messages of appreciation to SpaceNews,  
especially:

WB3CSY

WB4MLE

WB5PUM

ZS5FR

...and Mike Conley, AA6AE, who posts SpaceNews in the science classroom at Huntington Park High School in California, where they are building an amateur satellite ground station.

\* FEEDBACK/INPUT WELCOMED \*

=====

Mail to SpaceNews should be directed to the editor (John, KD2BD) via any

of the following paths:

FAX : 1-908-747-7107  
PACKET : KD2BD @ N2KZH.NJ.USA.NA  
INTERNET : kd2bd@ka2qhd.de.com -or- kd2bd@amsat.org  
SATELLITE : AMSAT-OSCAR-16

MAIL : John A. Magliacane, KD2BD  
Department of Engineering and Technology  
Advanced Technology Center  
Brookdale Community College  
Lincroft, New Jersey 07738  
U.S.A.

<<= SpaceNews: The first amateur newsletter read in space! -=>>

/EX

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John A. Magliacane, KD2BD \* /\ \* Voice : 1-908-224-2948  
Advanced Technology Center |/\| Packet : KD2BD @ N2KZH.NJ.USA.NA  
Brookdale Community College |/\| Internet: magliaco@pilot.njin.net  
Lincroft, NJ 07738 \* \/\ \* Morse : -. -.. ..--- .... -..

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Date: Tue, 06 Sep 1994 18:39:26 EDT  
From: psinntp!arrl.org!usenet@uunet.uu.net  
Subject: ARLK038 Keplerian data  
To: ham-space@ucsd.edu

SB KEP @ ARL \$ARLK038  
ARLK038 Keplerian data

ZCZC SK06  
QST de W1AW  
Keplerian Bulletin 38 ARLK038

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Date: Tue, 6 Sep 94 21:23:11 -0500  
From: news.delphi.com!usenet@uunet.uu.net  
Subject: Beginners list  
To: ham-space@ucsd.edu

I was wondering if there is a list of all the operating, amateur  
radio satellites along with a short description about modes, freqs.

etc. I have made a few contacts on Mir, RS10/11, and RS12/13 but that's about it. Thanks in advance. N0UJT

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Date: 7 Sep 94 04:02:33 GMT  
From: ihnp4.ucsd.edu!usc!nic-nac.CSU.net!charnel.ecst.csuchico.edu!  
yeshua.marcam.com!zip.eecs.umich.edu!newsxfer.itd.umich.edu!news1.oakland.edu!  
vela.acs.oakland.edu!ncschult@network.ucsd.edu  
Subject: listen in on space shuttle in Michigan?  
To: ham-space@ucsd.edu

I have a very long list of freqs. I want to know if I can listen in while the shuttle is up next week? I have a pro 43.

Thanks in advance, NCS

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Date: Tue, 6 Sep 1994 19:59:32 +0000  
From: ihnp4.ucsd.edu!swrinde!gatech!udel!news.sprintlink.net!demon!  
hooker.demon.co.uk!paul@network.ucsd.edu  
Subject: Two-Line Orbital Element Set Format  
To: ham-space@ucsd.edu

Hopefully a simple question ..

Could someone point me to some source code for converting the standard NASA 2 line element sets into orbital parameters giving :

inclination (I know, in the 2line data!)  
period  
apogee  
perigee

There must be some information/source code somewhere on the net showing how, but I haven't found it yet.

Thanks,

Paul

-----< Who 'zat? >-----  
Paul Wilson paul@hooker.demon.co.uk  
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Date: (null)

From: (null)

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End of Ham-Space Digest V94 #247

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